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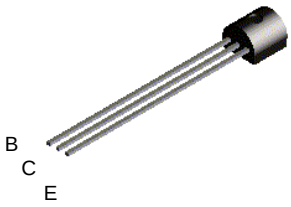

TO-92

PNP General Purpose Amplifier

This device is designed for general purpose amplifier applications at collector currents to 300mA.
Sourced from Process 68.

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	50	V
V_{CBO}	Collector-Base Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current - Continuous	300	mA
$T_{J,\ Tstg}$	Operating and Storage Junction Temperature Range	-55 to +150	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:
1) These ratings are based on a maximum junction temperature of 150°C.
2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

T_A = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
P_D	Total Device Dissipation Derate above 25°C	625 5.0	mW mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	°C/W

PNP General Purpose Amplifier
(continued)

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHARACTERISTICS					
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 2 mA	50		V
BV_{CBO}	Collector-Base Breakdown Voltage	I_C = 10 µA	60		V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = 10 µA	5		V
I_{CBO}	Collector Cutoff Current	V_{CB} = 30V		15	nA
I_{EBO}	Emitter Cutoff Current	V_{EB} = 4V		15	nA
ON CHARACTERISTICS*					
h_{FE}	DC Current Gain	I_C = 10 uA, V_{CE} = 5 V I_C = 2 mA, V_{CE} = 5 V	40 60	 300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C = 100 mA, I_B = 5 mA		0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C = 100 mA, I_B = 5 mA		1.1	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C = 2 mA, V_{CE} = 5 V	0.6	0.72	V
SMALL SIGNAL CHARACTERISTICS					
C_{ob}	Output Capacitance	V_{CB} = 10 V, f = 1.0 MHz		10	pF
h_{fe}	Small Signal Current Gain	I_C = 2 mA,V_{CE} = 5 V, f=1kHz	60		-
NF	Noise Figure	I_C = 200 uA,V_{CE} = 5 V, f=1kHz, Rg=2KOhms,BW=200Hz		10	dB
fT	Current Gain-Bandwidth Product	VCE=5V, IC=10mA,f=100MHz	200		MHz

*Pulse Test: Pulse Width < 300µs, Duty Cycle < 2.0%

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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